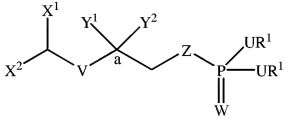
LISTING OF CLAIMS

What is claimed is:

1. (Currently Amended) A compound having the formula I



I

wherein

X^1, X^2, Y^1, and Y^2 ~~comprises~~ are, independently, hydrogen, fluorine, a hydroxyl group, a branched or straight chain C_1 to C_{25} alkyl group, OR^2, $OC(O)R^3$, or $NC(O)R^3$;

each U ~~comprises~~ is, independently, oxygen, sulfur, or NR^1;

V is not present or when V is present, V comprises oxygen or sulfur;

W ~~comprises~~ is oxygen or sulfur;

Z ~~comprises~~ is oxygen, sulfur, NR^1, CHF, ~~CF_2~~, or $CHOR^2$;

each R^1 ~~comprises~~ is, independently, hydrogen, a branched or straight chain C_1 to C_{25} alkyl group, a cationic counterion, or both R^1 form a ~~cyclic or heterocyclic~~ cycloalkyl group or a heterocycloalkyl group;

R^2 ~~comprises~~ is hydrogen, a branched or straight chain C_1 to C_{25} alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, a heteroaryl group or a protecting group;

R^3 ~~comprises~~ is a branched or straight chain C_1 to C_{25} alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, a heteroaryl group, or an oleate group,

or a pharmaceutically acceptable salt or ester thereof,

wherein when Y^1 and Y^2 are different groups, the stereochemistry at carbon a ~~is either substantially R or substantially S~~ is greater than 95% of one enantiomer with respect to the other enantiomer, and

wherein the compound having the formula I is not 1-acyl-*sn*-glycerol 3-phosphate and 2-acyl-*sn*-glycerol 3-phosphate, and

wherein when V is not present, W is oxygen, X^1 and Y^1 are hydrogen, and X^2 is hydroxyl, then Y^2 is not hydroxyl.

2. (Currently Amended) The compound of claim 1, wherein each U and W ~~comprises~~ is oxygen and V is not present.
3. (Withdrawn) The compound of claim 2, wherein Z ~~comprises~~ is oxygen, X^1 comprises hydrogen, and X^2 ~~comprises~~ is fluorine.
4. (Withdrawn) The compound of claim 3, wherein Y^1 ~~comprises~~ is hydrogen, Y^2 comprises $OC(O)R^3$, wherein R^3 ~~comprises~~ is a branched or straight chain C_1 to C_{25} alkyl group, and R^1 ~~comprises~~ is hydrogen.
5. (Canceled)
6. (Withdrawn) The compound of claim 2, wherein Z ~~comprises~~ is oxygen, Y^1 ~~comprises~~ is hydrogen, and Y^2 ~~comprises~~ is fluorine.
7. (Withdrawn) The compound of claim 6, wherein X^1 ~~comprises~~ is hydrogen, X^2 comprises $OC(O)R^3$, wherein R^3 ~~comprises~~ is a branched or straight chain C_1 to C_{25} alkyl group, and each R^1 ~~comprises~~ is hydrogen.
8. (Currently Amended) The compound of claim 2, wherein Z comprises CHF, Y^1 ~~comprises~~ is hydrogen, and Y^2 ~~comprises~~ is a hydroxyl group.
9. (Withdrawn) The compound of claim 8, wherein X^1 ~~comprises~~ is hydrogen, X^2 ~~comprises~~ is $OC(O)R^3$, wherein R^3 ~~comprises~~ is a branched or straight chain C_1 to C_{25} alkyl group, and each R^1 is hydrogen.
10. (Canceled)

11. (Withdrawn) The compound of claim 8, wherein X^1 ~~comprises~~ is hydrogen, X^2 is $OC(O)R^3$, wherein R^3 ~~comprises~~ is a branched or straight chain C_1 to C_{25} alkyl group, and each R^1 ~~comprises~~ is ethyl.
12. (Canceled)
13. (Withdrawn) The compound of claim 2, wherein Z ~~comprises~~ is CHF, Y^1 ~~comprises~~ is hydrogen, and Y^2 ~~comprises~~ is an alkyl group.
14. (Withdrawn) The compound of claim 13, wherein X^1 ~~comprises~~ is hydrogen, X^2 ~~comprises~~ is a silyl group, a hydroxyl group, or $OC(O)R^3$, wherein R^3 ~~comprises~~ is a branched or straight chain C_1 to C_{25} alkyl group, and each R^1 ~~comprises~~ is ethyl or each R^1 ~~comprises~~ is hydrogen.
15. (Withdrawn) The compound of claim 2, wherein Z ~~comprises~~ is CHF, Y^1 ~~comprises~~ is hydrogen, and Y^2 ~~comprises~~ is an $OC(O)R^3$, wherein R^3 ~~comprises~~ is a branched or straight chain C_1 to C_{25} alkyl group.
16. (Canceled)
17. (Withdrawn) The compound of claim [[2]] 89, wherein Z ~~comprises~~ is CF_2.
18. (Withdrawn) The compound of claim 17, wherein Y^1 ~~comprises~~ is hydrogen, Y^2 comprises $OC(O)R^3$, wherein R^3 ~~comprises~~ is a branched or straight chain C_1 to C_{25} alkyl group, and each R^1 ~~comprises~~ is an ethyl group or a sodium ion.
19. (Withdrawn) The compound of claim 18, wherein X^1 ~~comprises~~ is hydrogen and X^2 ~~comprises~~ is OH or $OC(O)R^3$, wherein R^3 ~~comprises~~ is a branched or straight chain C_1 to C_{25} alkyl group.
20. (Withdrawn) The compound of claim 17, wherein X^1 ~~comprises~~ is hydrogen, X^2 is $OC(O)R^3$, wherein R^3 ~~comprises~~ is a branched or straight chain C_1 to C_{25} alkyl group, and each R^1 ~~comprises~~ is an ethyl group or a sodium ion.
21. (Withdrawn) The compound of claim 20, wherein Y^1 ~~comprises~~ is hydrogen and Y^2 ~~comprises~~ is OH or $OC(O)R^3$, wherein R^3 ~~comprises~~ is a branched or straight chain C_1 to C_{25} alkyl group.

Claims 22-72 Cancelled

73. (Withdrawn) A method for improving wound healing in a subject in need of such improvement, comprising contacting the wound of a mammal with a compound of claim 1.

74. (Withdrawn) A method for treating or preventing in a subject a disease comprising administering to the subject a compound of claim 1.

75. (Withdrawn) The method of claim 74, wherein the disease comprises cancer or diabetes.

76. (Canceled)

77. (Withdrawn) A method for reducing inflammation or an allergic response in a subject comprising administering to the subject a compound of claim 1.

78. (Withdrawn) A method for increasing or altering cardiovascular function in a subject comprising administering to the subject a compound of claim 1.

79. (Withdrawn) A method for maintaining or terminating embryonic development in a subject comprising administering to the subject a compound of claim 1.

80. (Withdrawn) A method for eliciting or inhibiting platelet aggregation in a subject comprising administering to the subject a compound of claim 1.

81. (Withdrawn) A method for increasing or inhibiting cell growth and proliferation in a culture comprising contacting the cells in the culture with a compound of claim 1.

82. (Withdrawn) A method of treating or preventing a disease in a subject comprising administering a compound of claim 1 thereof as a PPARγ agonist.

83. (Withdrawn) A method of treating or preventing a disease in a subject comprising administering a compound of claim 1 to inhibit a lipid phosphatase, lipid kinase, or phospholipase enzyme.

84. (Withdrawn) The use of a compound of claim 1 for targeting the discovery of a drug.

85. (Withdrawn) A method for growing or proliferating cells in a culture comprising administering to the cells in the culture a compound of claim 1.

86. (Withdrawn) A method for determining the activity of lysophosphatidic acid or phosphatidic acid, comprising the steps of:

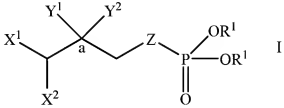
a) measuring the activity of a compound of claim 1; and

b) measuring the same activity of lysophosphatidic acid or phosphatidic acid.

87. (Withdrawn) The method of claim 86, wherein the method comprises identifying agonists or antagonists of lysophosphatidic acid binding to or activating lysophosphatidic acid receptors of the edg class in a cell.

88. (Withdrawn) The method of claim 86, wherein the method comprises identifying agonists or antagonists of lysophosphatidic acid binding to or activating lysophosphatidic acid receptors of the non-edg class in a cell.

89. (New) A compound having the formula I



I

wherein

X^1, X^2, Y^1, and Y^2 are, independently, hydrogen, fluorine, a hydroxyl group, OR^2, $OC(O)R^3$, or $NC(O)R^3$;

Z is CF_2;

each R^1 is, independently, hydrogen, a branched or straight chain C_1 to C_{25} alkyl group, a cationic counterion, or both R^1 form a cycloalkyl group or a heterocycloalkyl group;

R^2 is hydrogen, a branched or straight chain C_1 to C_{25} alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, a heteroaryl group or a protecting group;

R^3 is a branched or straight chain C_1 to C_{25} alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, a heteroaryl group, or an oleate group,

wherein when Y^1 and Y^2 are different groups, the stereochemistry at carbon a is greater than 95% of one enantiomer with respect to the other enantiomer.

90. (New) A method for improving wound healing in a subject in need of such improvement, comprising contacting the wound of a mammal with a compound of claim 89.

91. (New) A method for treating or preventing in a subject a disease comprising administering to the subject a compound of claim 89.

92. (New) The method of claim 91, wherein the disease comprises cancer or diabetes.

93. (New) A method for reducing inflammation or an allergic response in a subject comprising administering to the subject a compound of claim 89.

94. (New) A method for increasing or altering cardiovascular function in a subject comprising administering to the subject a compound of claim 89.

95. (New) A method for maintaining or terminating embryonic development in a subject comprising administering to the subject a compound of claim 89.

96. (New) A method for eliciting or inhibiting platelet aggregation in a subject comprising administering to the subject a compound of claim 89.

97. (New) A method for increasing or inhibiting cell growth and proliferation in a culture comprising contacting the cells in the culture with a compound of claim 89.

98. (New) A method of treating or preventing a disease in a subject comprising administering a compound of claim 89 thereof as a PPARγ agonist.

99. (Withdrawn) A method of treating or preventing a disease in a subject comprising administering a compound of claim 89 to inhibit a lipid phosphatase, lipid kinase, or phospholipase enzyme.

100. (New) The use of a compound of claim 89 for targeting the discovery of a drug.

101. (New) A method for growing or proliferating cells in a culture comprising administering to the cells in the culture a compound of claim 89.

102. (New) A method for determining the activity of lysophosphatidic acid or phosphatidic acid, comprising the steps of:

a) measuring the activity of a compound of claim 89; and

c) measuring the same activity of lysophosphatidic acid or phosphatidic acid.

103. (New) The method of claim 102, wherein the method comprises identifying agonists or antagonists of lysophosphatidic acid binding to or activating lysophosphatidic acid receptors of the edg class in a cell.

104. (New) The method of claim 102, wherein the method comprises identifying agonists or antagonists of lysophosphatidic acid binding to or activating lysophosphatidic acid receptors of the non-edg class in a cell.